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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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| 09/745,268 | 12/21/2000 | Roderick Nelson | 1999-0021 | 7623 |
| 24197 | 7590 | 01/10/2005 | EXAMINER | |
| KLARQUIST SPARKMAN, LLP 121 SW SALMON STREET SUITE 1600 PORTLAND, OR 97204 | | | CHO, UN C | |
| | | | ART UNIT | PAPER NUMBER |
| | | | 2687 | |

DATE MAILED: 01/10/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

| | | |
|------------------------------|-----------------|------------------|
| Office Action Summary | Application No. | Applicant(s) |
| | 09/745,268 | NELSON, RODERICK |
| | Examiner | Art Unit |
| | Un C Cho | 2687 |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) Responsive to communication(s) filed on 01 September 2004.

2a) This action is **FINAL**. 2b) This action is non-final.

3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4) Claim(s) 1-29 is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5) Claim(s) _____ is/are allowed.

6) Claim(s) 1-29 is/are rejected.

7) Claim(s) _____ is/are objected to.

8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9) The specification is objected to by the Examiner.

10) The drawing(s) filed on _____ is/are: a) accepted or b) objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) All b) Some * c) None of:
1. Certified copies of the priority documents have been received.
2. Certified copies of the priority documents have been received in Application No. _____.
3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

| | |
|---|--|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____. | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s)/Mail Date. _____. 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) 6) <input type="checkbox"/> Other: _____. |
|---|--|

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claims 1, 3 – 5, 7 – 8, 11, 13 – 15, 17 – 18 are rejected under 35 U.S.C. 102(e) as being anticipated by Hall et al. (US 6,424,837).

Regarding claim 1, Hall discloses transmitting a communication signal from a wireless device to a radio base station (Hall, Col. 4, lines 14 – 16), measure the signal level associated with the communication signal (Hall, Col. 4, lines 32 – 34), obtaining location information of the wireless device by analyzing the call access (Hall, Col. 5, lines 57 – 58) and evaluating the performance of the wireless system using the measurement of signal level and the location information of the wireless device (Hall, Col. 4, lines 32 – 34 and Col. 5, lines 57 – 58).

Regarding claim 3, Hall discloses that the location information of the wireless device is collected from a plurality of cell sites (Hall, Col. 5, lines 24 – 25 and Col. 6, lines 59 – 61).

Regarding claim 4, Hall discloses that the step of obtaining the location information involves analyzing timestamp data (Hall, Col. 5, lines 26 – 31).

Regarding claim 5, Hall discloses that the step of obtaining the location information involves using a time difference of arrival location processor (Hall, Col. 6, lines 50 – 55).

Regarding claim 7, Hall discloses that the time difference of arrival location processor is in the wireless system (Hall, Col. 6, lines 50 – 55).

Regarding claim 8, the claim is interpreted and rejected for the same reason as set forth in claim 1.

Regarding claim 11, the claim is interpreted and rejected for the same reason as set forth in claim 1.

Regarding claim 13, the claim is interpreted and rejected for the same reason as set forth in claim 3.

Regarding claim 14, the claim is interpreted and rejected for the same reason as set forth in claim 4.

Regarding claim 15, the claim is interpreted and rejected for the same reason as set forth in claim 5.

Regarding claim 17, the claim is interpreted and rejected for the same reason as set forth in claim 7.

Regarding claim 18, the claim is interpreted and rejected for the same reason as set forth in claim 1.

3. Claims 21 – 25 and 27 – 29 are rejected under 35 U.S.C. 102(e) as being anticipated by Hawkes et al. (US 5,973,643).

Regarding claim 21, Hawkes discloses a plurality of wireless devices transmitting communications signals to a radio base station (Hawkes, Col. 5, lines 18 – 20), a first receiver located at the radio base station receiving the communication signals and transmits the communication signals to the mobile switching center (Hawkes, Col. 11, lines 54 – 59), a second receiver located at the radio base station monitoring the communication signals and transmitting timestamp data associated with the communications to the switch (Hawkes, Col. 11, lines 52 – 64 and Col. 16, lines 4 – 13) and a central real-time location processor (RLP) coupled to the mobile switching center evaluating the performance of the wireless system based on cellular telephone transmissions (Hawkes, Col. 5, lines 26 – 29 and Col. 10, lines 56 – 59).

Regarding claim 22, Hawkes discloses that a time difference of arrival location processor (CPU, Fig. 4, 27) (Hawkes, Col. 15, lines 38 – 40 and Col. 16, lines 39 – 42) is coupled to the mobile switching center and to the central real-time location processor (Hawkes, Col. 5, lines 26 – 29 and Col. 10, lines 56 – 59).

Regarding claim 23, the claim is interpreted and rejected for the same reason as set forth in claim 21.

Regarding claim 24, the claim is interpreted and rejected for the same reason as set forth in claim 21.

Regarding claim 25, Hawkes discloses a second receiver receiving location information using TDOA, which has distortion characteristics of the communication signal (Hawkes, Col. 16, lines 4 – 13).

Regarding claim 27, the claim is interpreted and rejected for the same reason as set forth in claim 21.

Regarding claim 28, the claim is interpreted and rejected for the same reason as set forth in claim 22.

Regarding claim 29, the claim is interpreted and rejected for the same reason as set forth in claim 21.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 2 and 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hall in view of Rappaport et al. (US 5,451,839).

Regarding claim 2, Hall as applied to claim 1 above does not specifically disclose that the performance of the wireless system is performed in real-time. In an analogous art, Rappaport discloses evaluating the performance of the wireless system is performed in real-time (Rappaport, Col. 3, line 67 through Col. 4, line 10). Therefore, it would have been obvious to one of ordinary skill in the

art at the time the invention was made to provide the technique of Rappaport to the system of Hall in order to provide a portable real-time network monitoring system for field testing and troubleshooting a cellular telephone network, paging network or mobile radio system.

Regarding claim 12, the claim is interpreted and rejected for the same reason as set forth in claim 2.

6. Claims 6, 10, 16 and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hall in view of Kong (US 6,275,186).

Regarding claim 6, Hall discloses the limitations of claim 5. However, Hall does not specifically disclose that the time difference of arrival location processor is in the wireless device. In an analogous art, Kong discloses that the TDOA location processor (Fig. 3A, 320) is in the mobile station (Kong, Col. 7, lines 19 – 45). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to provide the technique of Kong to the system of Hall in order to provide a device and method for locating an mobile station by measuring the Time Difference Of Arrivals and Signal-to-Interference Ratios of forward pilots received from neighbor base stations in a mobile communication system operated in synchronization.

Regarding claim 16, the claim is interpreted and rejected for the same reason as set forth in claim 6.

Regarding claim 10, Hall in view of Kong as applied to claim 6 above discloses obtaining location information of the mobile station is accomplished using RF finger printing using dispersion characteristics of the communication signal (Kong, Col. 7, lines 28 – 38).

Regarding claim 20, the claim is interpreted and rejected for the same reason as set forth in claim 10.

7. Claims 9 and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hall in view of Ayoub et al. (US 6,477,363).

Regarding claim 9, Hall discloses the limitations of claim 8. However, Hall does not specifically disclose obtaining location information of the wireless device is accomplished using a global positioning system unit in the wireless device. In an analogous art, Ayoub discloses obtaining location information of a mobile telephone set (Fig. 1, 1) is accomplished using a location detection unit (GPS, Fig. 1, 12) (Ayoub, Col. 4, lines 2 – 12). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to provide the technique of Ayoub to the system of Hall in order to provide a system for communicating the location of an emergency caller from a mobile telephone set through a telephone network to a control station handling the emergency all which can be easily implemented.

Regarding claim 19, the claim is interpreted and rejected for the same reason as set forth in claim 9.

8. Claim 26 is rejected under 35 U.S.C. 103(a) as being unpatentable over Hawkes in view of Ayoub et al. (US 6,477,363).

Regarding claim 26, Hawkes discloses that the second receiver receives location from the plurality of wireless devices (Hawkes, Col. 16, lines 4 – 13). However, Hawkes does not specifically disclose that the receiving location information is from global position system. In an analogous art, Ayoub discloses obtaining location information of a mobile telephone set (Fig. 1, 1) is accomplished using a location detection unit (GPS, Fig. 1, 12) in the mobile telephone (Ayoub, Col. 4, lines 2 – 12). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to provide the technique of Ayoub to the system of Hall in order to provide a system for communicating the location of an emergency caller from a mobile telephone set through a telephone network to a control station handling the emergency all which can be easily implemented.

Response to Arguments

9. Applicant's arguments filed 9/1/2004 have been fully considered but they are not persuasive.

Regarding claim 1, the applicant argued that the reference by Hall (US 6,424,837) does not disclose a method of monitoring performance of a wireless system that comprises:

- a) transmitting a communication signal from a mobile wireless device to a radio base station;
- b) obtaining uplink performance parameters associated with the communication signal;
- c) obtaining location information of the mobile wireless device by analyzing the communication signal; and
- d) evaluating the performance of the wireless system using the uplink performance parameters and the location information of the mobile wireless device.

The examiner disagrees with the applicant's argument and the reasoning is as follows:

Based on the claim language presented by the applicant in claim 1, it is unclear what is the purpose of evaluating the performance of the wireless system using the uplink performance parameters and the location information of the mobile wireless device. The reference by Hall as previously presented discloses a mobile wireless device transmitting a communication signal to a radio base station, monitoring sites obtaining signal strength information associated with the communication signal sent from the mobile wireless device, also it obtains the location of the mobile wireless device by analyzing the communication signal, makes a determination whether to perform a handoff or not based on the signal strength and the location information of the mobile wireless device (the system having knowledge of the location of the mobile wireless device by knowing which

base station is the wireless device communicating with in order to perform handoff to a nearby base station providing better signal) (Hall, Col. 4, lines 5 – 67 and Col. 5, lines 21 – 60).

Regarding claim 21, the applicant argued that reference by Hawkes et al. (US 5,973,643) does not disclose a system for monitoring performance of a wireless system that comprises, in part, a system analyzer coupled to a switch which evaluates the performance of a wireless system based on uplink performance parameters and locations of wireless devices.

The examiner disagrees with the applicant's argument and the reasoning is as follows:

Hawkes discloses a plurality of wireless devices transmitting communications signals to a radio base station (Hawkes, Col. 5, lines 18 – 20), a first receiver located at the radio base station receiving the communication signals and transmits the communication signals to the mobile switching center (Hawkes, Col. 11, lines 54 – 59), a second receiver located at the radio base station monitoring the communication signals and transmitting timestamp data associated with the communications to the switch (Hawkes, Col. 11, lines 52 – 64 and Col. 16, lines 4 – 13) and a central real-time location processor (RLP) coupled to the mobile switching center evaluating the performance of the wireless system based on cellular telephone transmissions (Hawkes, Col. 5, lines 26 – 29 and Col. 10, lines 56 – 59).

Conclusion

10. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Un C Cho whose telephone number is (703) 305-8725. The examiner can normally be reached on M ~ F 8:00AM to 4:30PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Lester Kincaid can be reached on (703) 306-3016. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



SONNY TRINH
PRIMARY EXAMINER

Un C Cho 11/3/05 VC
Examiner
Art Unit 2687